



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

(EHR) and hospital discharge data to describe acute change across healthcare systems, followed by a retrospective chart review across 5 hospitals documenting the rise in emergency department (ED) visits for suicidality, and qualitative data that captures real-time change in implementation of school-based preventive and crisis services in California.

Methods: The study designs are: 1) a retrospective analysis of aggregate EHR data across three 12-week time cohorts in 2020; 2) a retrospective observational study comparing any acute-care encounters stratified by ED visits and hospitalizations across 2 time cohorts matched by calendar 24-week intervals; 3) a retrospective chart review of pediatric ED visits for suicide across 5 hospitals during 4-month time cohorts matched by calendar month; and 4) a mixed-methods statewide program evaluation.

Results: Children of minority race ($p < 0.001$) and young children ($p < 0.001$) experienced disproportionate reductions in mental health-related ED visits during the pandemic. Despite an overall decline in mental health-related ED visits, the absolute number of suicide-related visits was greater in the summer (+29%) and fall (+25%) of 2020 compared to the preceding year. All-cause acute-care encounters in US children's hospitals declined 46.8% during the first 24 weeks following COVID-19, with a 50.5% and 30.9% decline in ED visits and hospitalizations, respectively. The percent declines for acute mental health encounters were about one-third less compared to physical health encounters and varied by demographic and clinical characteristics ($p < 0.001$). Compared to a matched 4-month time cohort in 2019, the percentage of ED visits for teen suicide attempt was higher, especially among Asian Americans and African Americans. Implementation of care post-COVID-19 accentuated the administrative barriers to care as well as stimulated innovative solutions that leveraged technologies.

Conclusions: Collectively, findings suggest an acute and disproportionate change in child and adolescent mental health service use. Suicidality remained one of the most frequent drivers of ED use after the onset of the COVID-19 pandemic.

R, EPI, LONG

Sponsored by AACAP's Emergency Child Psychiatry Committee

<https://doi.org/10.1016/j.jaac.2021.07.694>

25.1 CLINICAL AND DEMOGRAPHIC VARIATION IN CHILDREN'S MENTAL HEALTH-RELATED EMERGENCY DEPARTMENT VISITS DURING THE COVID-19 PANDEMIC



Juliet Edgcomb, MD, PhD, University of California, Los Angeles, jedgcomb@mednet.ucla.edu; Nicole Benson, MD, Regina Bussing, MD, MSHS, Rohith Thiruvalluru, MS, Jyotishman Pathak, PhD, Bonnie T. Zima, MD, MPH

Objectives: This presentation aims to: 1) examine change in children's mental health-related emergency department (ED) visits during the COVID-19 pandemic; and 2) examine variation by sociodemographic characteristics and diagnoses.

Methods: This is a retrospective analysis of aggregate electronic health record (EHR) data from 3 Clinical and Translational Science Award (CTSA)-funded academic medical centers and affiliated hospitals, spanning rural and urban regions of the United States. Data were obtained from i2b2 server software. The total number of ED visits by children aged 3 to 17 years was extracted during six 12-week time cohorts (March to May, June to August, September to November) matched to the preceding year. The demographic (age, sex, race/ethnicity) and diagnostic stratification of each cohort was compared.

Preliminary Results: Compared with 2019, total child ED visits associated with mental health diagnoses in 2020 were reduced by 49.7% in March-May ($N = 1502$ vs $N = 756$), 1.9% in June-August ($N = 1137$ vs $N = 1115$), and 29.5% in September-November ($N = 1576$ vs $N = 1111$). ED visits across all mental health diagnostic categories decreased in March-May 2020 vs 2019. ED visits for mood disorders (+26%), suicide-related visits (+29%), eating disorders (+120%), and substance use (+18%) were increased in June-August 2020 vs 2019. Of these, 2 remained elevated above prepandemic levels in September-November 2020: eating disorders (+23%) and suicide-related visits (+25%). Suicide-related visits were significantly elevated in September-November 2020 vs September-November 2019 (OR = 1.4; 95% CI, 1.2-1.7). Children of

minority race experienced a greater reduction in mental health-related ED visits during the pandemic compared with White youth ($\chi^2 = 41.8$; $p < 0.001$). Young children (3-5 years old) experienced a greater reduction in visits across all time points compared with older children (6-12 years old) and adolescents (13-17 years old) ($\chi^2 = 104.8$; $p < 0.001$).

Conclusions: Clinical and demographic variation is an important overlay to the temporal fluctuation in children's mental health-related ED visits during the COVID-19 pandemic. Results indicating an absolute increase in suicide-related visits, and a disproportionate decrease in visits among minority youth and young children, suggest areas of clinical need and disparities in care.

EPI, RCR, MCS

Supported by an American Psychiatric Association Foundation COVID-19 Emergency Grant

<https://doi.org/10.1016/j.jaac.2021.07.695>

25.2 EARLY IMPACT OF THE COVID-19 SHIFT TO REMOTE LEARNING ON ACUTE CHILD MENTAL HEALTH CARE IN US CHILDREN'S HOSPITALS



Bonnie T. Zima, MD, MPH, UCLA Health Services Research Center, bzima@mednet.ucla.edu; Juliet Edgcomb, MD, PhD, Jonathan Rodean, PhD, Regina Bussing, MD, MSHS

Objectives: The objectives of this session are to: 1) examine variation in the percentage change in acute care encounters in US children's hospitals by primary physical and mental health diagnosis before and after the COVID-19 shift to remote learning (RL); and 2) examine how the percentage change in primary psychiatric acute care encounters varies by child sociodemographic and clinical characteristics before and after the COVID-19 shift to RL.

Methods: A retrospective observational study was conducted comparing any acute care encounters stratified by emergency department (ED) visits with discharge and hospitalizations across 2 time cohorts matched by calendar 24-week intervals. Using the Pediatric Health Information System (PHIS) database, the final sample includes all emergency department visits with discharge and hospitalizations of patients ages 3 to 17 years from 29 hospitals with discharge and billing data for both study time periods (pre: $n = 937,525$; post: $n = 499,153$).

Results: Overall, all-cause pediatric acute care encounters declined 46.8% during the first 24 weeks following the COVID-19 shift to RL, with a 50.5% decline for ED visits and 30.9% decline in hospitalizations. Among acute care encounters for primary mental health diagnoses, the percent declines were approximately one-third less compared to those for physical health diagnoses (any: -29.7% vs -47.5%; ED: -34.6% vs -51.0%; hospitalization: -21.5% vs -31.8%). The percent change in acute mental health encounters significantly varied by child sociodemographic characteristics and type of psychiatric diagnostic group ($p < 0.001$) with the least declines among adolescents (-22.5%), females (-22.0%), Whites (-24.4%), and patients with eating disorders (3.1%), intellectual disabilities (-5.6%), schizophrenia (-6.8%), substance abuse (-16.5%), suicide (-16.9%), and autism spectrum disorder (-19.7%). Across both time periods, the 3 most prevalent mental health diagnoses were depression (pre: 26.6% [$n = 11,128$]; post: 25.8% [$n = 7668$]), suicide (pre: 23.1% [$n = 9655$]; post: 27% [$n = 8027$]), and anxiety disorders (pre: 9.3% [$n = 3871$]; post: 9.5% [$n = 2836$]).

Conclusions: Following the COVID-19 shift to RL, acute care encounters in US children's hospitals disproportionately declined less for children with primary mental health diagnoses, with significant disparities in access by age, sex, and race/ethnicity.

EPI, S, R

<https://doi.org/10.1016/j.jaac.2021.07.696>

25.3 IMPACT OF EARLY COVID-19 LOCKDOWN ON SUICIDE ATTEMPTS IN ADOLESCENTS



Vera Feuer, MD, Cohen Children's Medical Center/Northwell Health, VFeuer@northwell.edu

Objectives: This study aimed to look at how the first 3 months of the COVID-19 pandemic had an impact on suicide attempts by adolescents admitted to

the emergency department or inpatient services, compared with the same period during the previous year.

Methods: This study was a multicenter retrospective chart review. Inclusion criteria were patients aged 10 to 18 years old who were treated in the emergency department for an intentional suicidal attempt at 5 different sites. Specific diagnostic codes were used to isolate charts that were significant for intentional suicidal attempts during the period of March 1 through June 30 of 2019 and 2020. Selected charts were then reviewed with a tool created to capture specific items from each chart to determine the details of the suicidal attempts, including demographics, medical interventions needed, severity of attempt, details of mental health history, and disposition.

Results: The percentage of patients presenting to the emergency department following a suicide attempt from March to July 2020 was compared with corresponding rates from January to July 2019. Results indicated a higher percent of patients presenting with suicide attempts in 2020 compared with the same months in 2019. These results were especially significant for Asian American and African American youths. The rate of patients requiring mental health admissions also increased during the same period.

Conclusions: The initial period of the pandemic had a clear impact on youth presenting to the emergency department.

S, STRESS, MCS

<https://doi.org/10.1016/j.jaac.2021.07.697>

25.4 CHALLENGES AND INNOVATIONS IN CHILD PREVENTIVE AND CRISIS INTERVENTION DELIVERY ACROSS CALIFORNIA BEFORE AND AFTER COVID-19 SCHOOL CLOSURES



Roya Ijadi-Maghsoodi, MD, MS, University of California, Los Angeles, rijadimaghsoodi@mednet.ucla.edu;

Corey O'Malley, PhD, Elyse Tascione, MA, Alanna Montero, BS, Kenneth B. Wells, MD, MPH, Bonnie T. Zima, MD, MPH

Objectives: The objective of this presentation is to describe real-time barriers and rapid uptake of innovative solutions in the delivery of school-based preventive and crisis intervention programs before and after COVID-19–related school closures.

Methods: Among 6 school-based prevention and 8 county-based child crisis intervention programs funded by the California Mental Health Service Act, 42 semi-structured interviews at 6-month intervals with program leads and staff were conducted at crisis intervention programs ($n = 24$) and school/county collaborative programs ($n = 18$). The time period for qualitative interviews spanned 9 months prior to and up to 6 months after COVID-19–related school closures. The Consolidated Framework for Implementation Research informed the interview guides and qualitative data analyses.

Results: Programs reported increased clinical acuity and variability in demand for mental health services related to COVID-19. Within the school/county collaborative programs, barriers to care included reduced access to students and school personnel due to remote learning and virtual learning fatigue. Innovations included the development of classroom crisis warning signs education based on remote learning attendance. Among crisis intervention programs, barriers to care included staff turnover and resource variability while facilitators were in collaboration with external agencies, additional funding, and adaptation to community needs. Programs pivoted to meet increased community mental health and social needs by delivering trainings, enhancing agency partnerships, and providing community outreach. Uptake of telehealth was mixed, with some clinicians rapidly adopting telehealth to deliver crisis intervention services while others preferred to provide in-person care following CDC guidelines.

Conclusions: The onset of the COVID-19–related school closures accentuated existing administrative barriers to care as well as stimulated innovative solutions that leveraged functionalities of technologies for remote learning and telehealth. Future research is needed to examine these shifts in care delivery over time and to identify inner and outer contextual factors that influence implementation.

SC, TVM, S

Supported by CA Mental Health Services Oversight & Accountability Commission Grant 17MHS0AC073

<https://doi.org/10.1016/j.jaac.2021.07.698>

SYMPOSIUM 26

CHILDREN AND SCREENS: YOUTH DIGITAL MEDIA USE AND MENTAL HEALTH OUTCOMES



Paul E. Weigle, MD, Hartford Healthcare, paul.weigle@hhchealth.org; Pamela Hurst-Della Pietra, DO, Children and Screens: Institute of Digital Media and Child Development, pam@childrenandscreens.com

Objectives: A burgeoning body of literature documents how features of contemporary screen media may induce compulsive use, and how engagement habits interact with mental illness. However, youth media habits are evolving rapidly along with their relevance to health and well-being, so new data are invaluable for modern practitioners. We present novel work by leading researchers documenting contemporary patterns and parameters of youth screen media engagement and their implications with mental health.

Methods: Important unpublished and newly published studies inform how youth now use screen media, how use can become compulsive or pathological, and ramifications for their mental health. These data will be presented in the context of the authors' previous works, and its significance for clinical care will be highlighted. Presenters will utilize online audience polling to elicit questions and comments to support a robust dialogue.

Results: Rapidly accumulating research evidence regarding screen media habits and their relationship with mental health is challenging to integrate into actionable information. Specific features of screen media platforms encourage and induce compulsory use, even in toddlers. Particular compulsory patterns of cellphone use predict depression and anxiety. Simultaneously, young people are more likely than ever to turn to social media and online resources to address these very problems, with varying degrees of success. Some youth engage in pathologically excessive online gaming, which typically increases over time, worsening depression, aggression, and social anxiety. Screen-time reduction interventions may moderate use and related risks temporarily, but enacting lasting change remains challenging.

Conclusions: It is the charge of child and adolescent psychiatrists to help youth lead healthy lives in a world dominated by screen media. The latest research regarding changes in screen media norms among youth and ramifications for mental health enable us to evaluate the habits of our patients and guide them toward safer, healthier lives.

COMP, MED, R

Sponsored by AACAP's Media Committee

<https://doi.org/10.1016/j.jaac.2021.07.700>

26.1 FORMAL FEATURES OF TOUCHSCREEN APPS MAY INDUCE COMPULSIVE USE IN TODDLERS



Dimitri Christakis, MD, Seattle Children's Research Institute - Child Health, Behavior and Development, dimitri.christakis@seattlechildrens.org

Objectives: The objective of this presentation is to determine whether formal features of interactive apps can make it more difficult for children aged 18 to 24 months to disengage from devices.

Methods: A convenience sample of 32 children was randomized in a 3-way crossover study across 3 conditions: 1) a reactive electronic toy (REAL); 2) a reactive iPad app that simulates said toy (APP); and 3) an interactive app with predictable and unpredictable features (APP PROGRAM). Children were brought into a laboratory setting and observed and videotaped behind 1-way glass during a "Respond to Behavior Request" protocol in which, at a prespecified interval, the child was asked to return the toy with which he/she was playing. Compliance with requests was coded by 2 reviewers who watched the taped encounters.